



The U.S. Dairy Industry Diversity and Challenges for Foreign Animal Disease

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Connecting Cows, Cooperatives, Capitol Hill, & Consumers

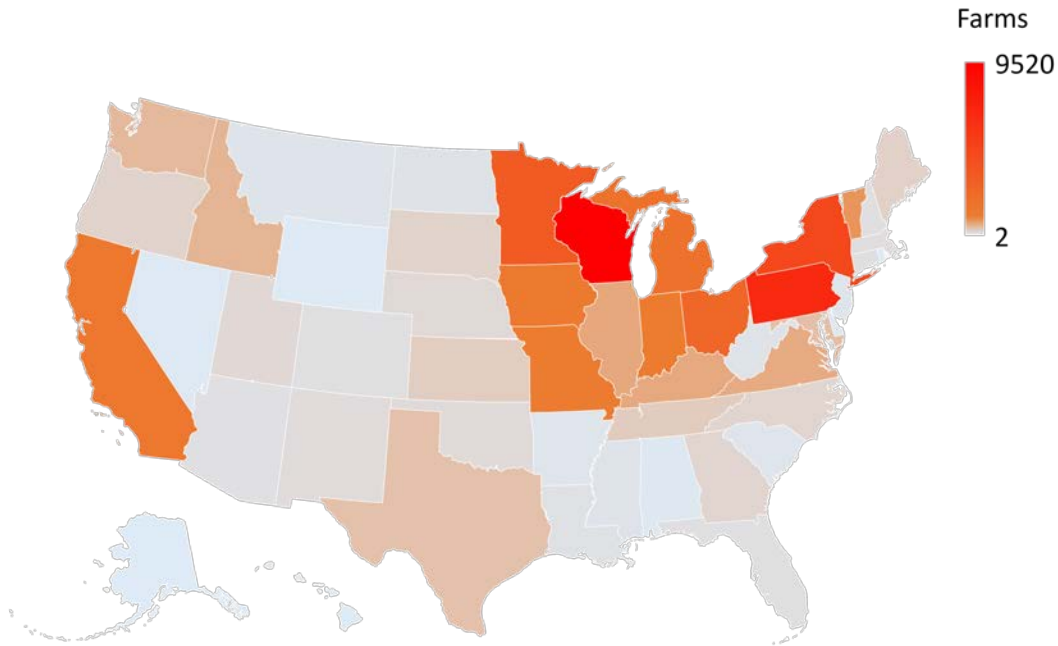


Industry Facts and Figures

Locations, Facilities, Animal Movements

Licensed Dairy Farms Vary Across States

Licensed Dairy Farms by State, 2017



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- Wisconsin 9520 dairy farms
- Pennsylvania 6650 dairy farms
- New York 4650 dairy farms
- Minnesota 3350 dairy farms
- Ohio 2560 dairy farms
- Nevada 20 dairy farms
- Wyoming 10 dairy farms
- Rhode Island 10 dairy farms
- Hawaii 2 dairy farms
- Alaska 2 dairy farms

All Dairy Farms are Licensed to Sell Milk

- 41,809 Licensed and Inspected dairy farms (2017):
 - State Departments of Agriculture; or
 - State Departments of Public Health
- Must comply with Grade “A” Pasteurized Milk Ordinance
 - FDA model food safety code
 - Updated every 2 years
- Milk must be transported from the farm at least every 2 days

Grade “A” Pasteurized Milk Ordinance

(Includes provisions from the Grade “A” Condensed and Dry Milk Products and Condensed and Dry Whey—Supplement I to the Grade “A” PMO)

2013 Revision



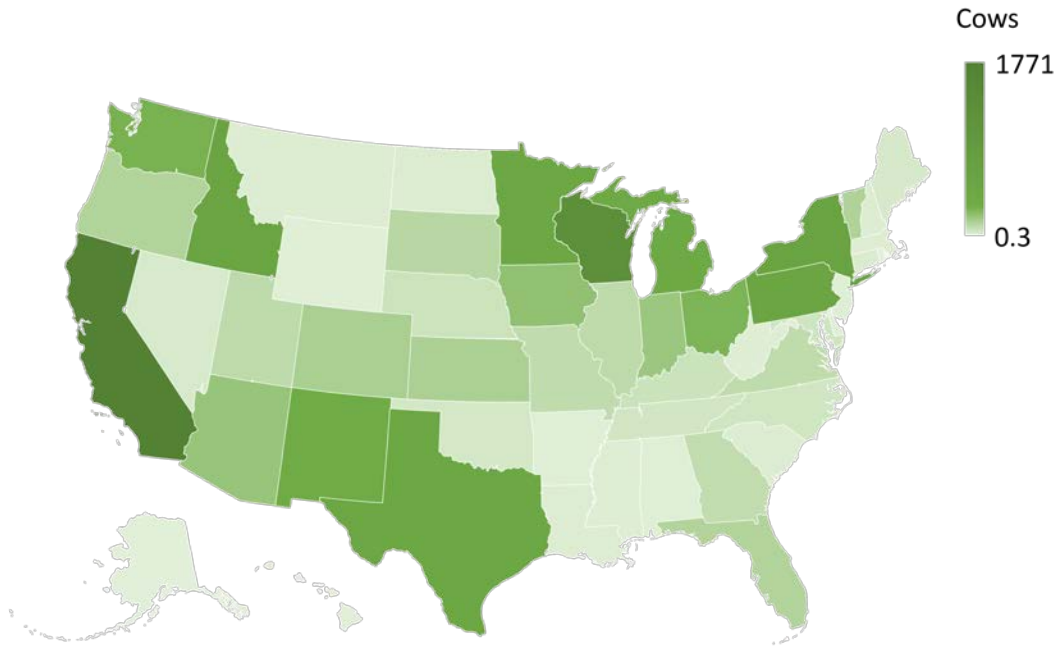
U.S. Department of Health and Human Services

Public Health Service

Food and Drug Administration

Total Dairy Cows Varies Across States

Lactating Cows(1000s) by State, 2017

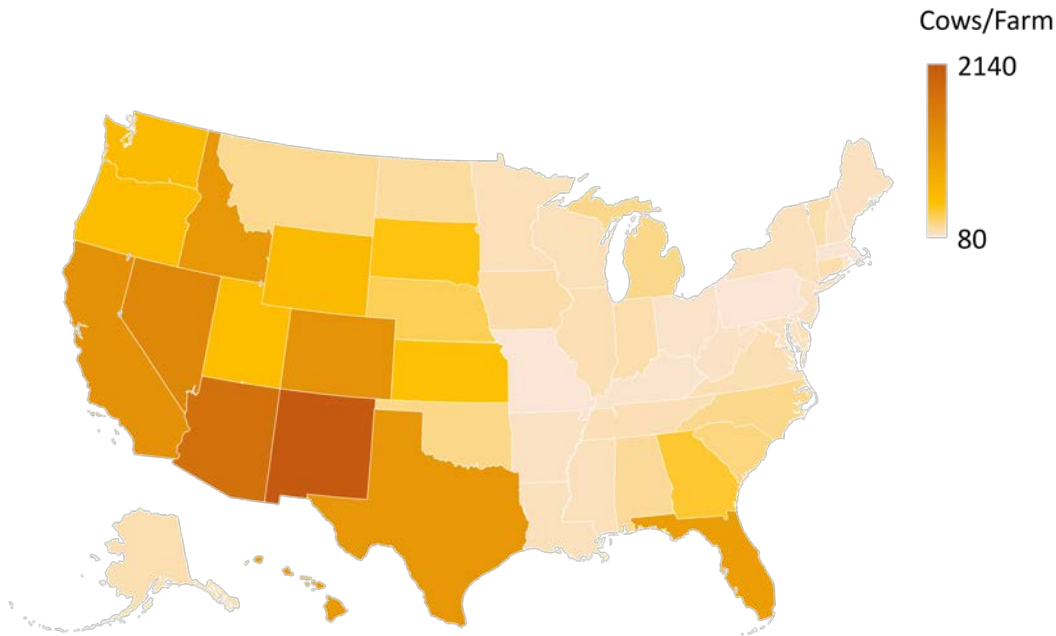


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- California 1.77 Million cows
- Wisconsin 1.28 Million cows
- New York 620,000 cows
- Idaho 587,000 cows
- Pennsylvania 530,000 cows
- Wyoming 6,000 cows
- Delaware 5,000 cows
- Hawaii 2,200 cows
- Rhode Island 900 cows
- Alaska 300 cows

Dairy Cows Per Farm Varies Across States

Lactating Cows per Farm by State, 2017

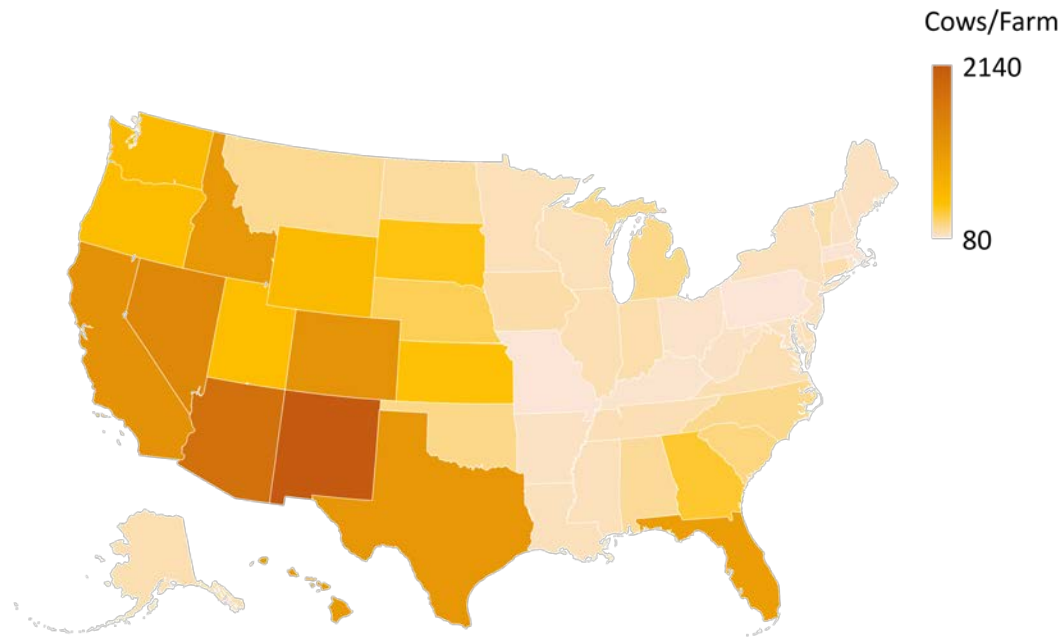


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- New Mexico 2140 cows/farm
- Arizona 1700 cows/farm
- Nevada 1400 cows/farm
- California 1247 cows/farm
- Colorado 1225 cows/farm
- Kentucky 95 cows/farm
- Rhode Island 90 cows/farm
- Massachusetts 80 cows/farm
- Missouri 80 cows/farm
- Pennsylvania 80 cows/farm

Some Dairy Farms Have Environmental Permits

Lactating Cows per Farm by State, 2017



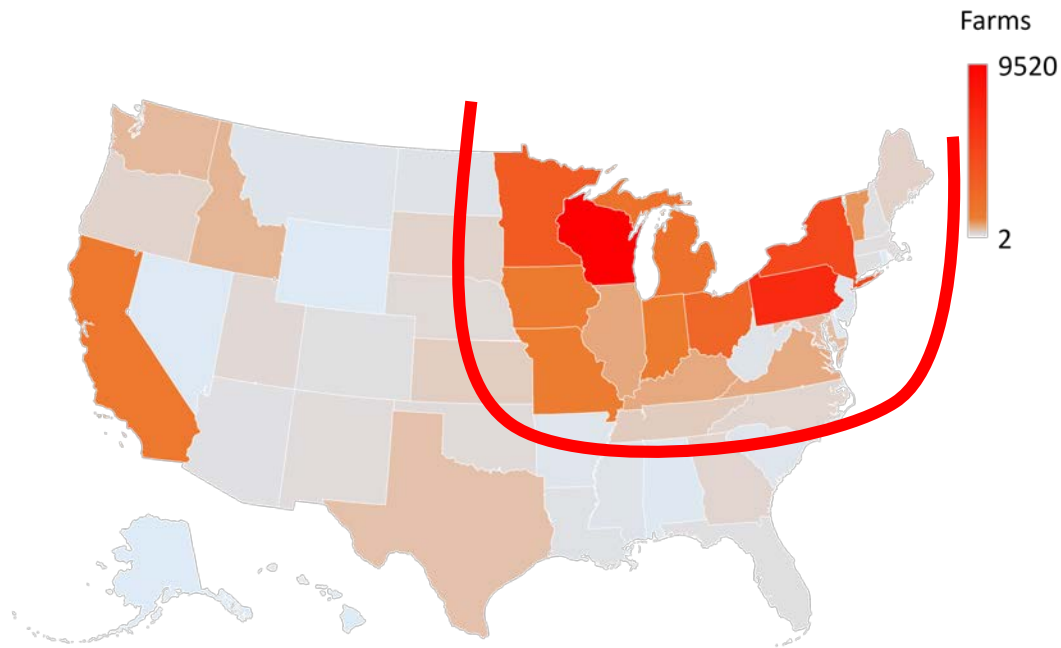
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■ Concentrated Animal Feeding Operation Clean Water Act Permit

- State Departments of Environment
- Most dairy farms with 700+ cows
- Some states have smaller herd requirements
 - New York is 300+ cows

Dairy Facility Types – Tie Stall & Stanchion

Licensed Dairy Farms by State, 2017



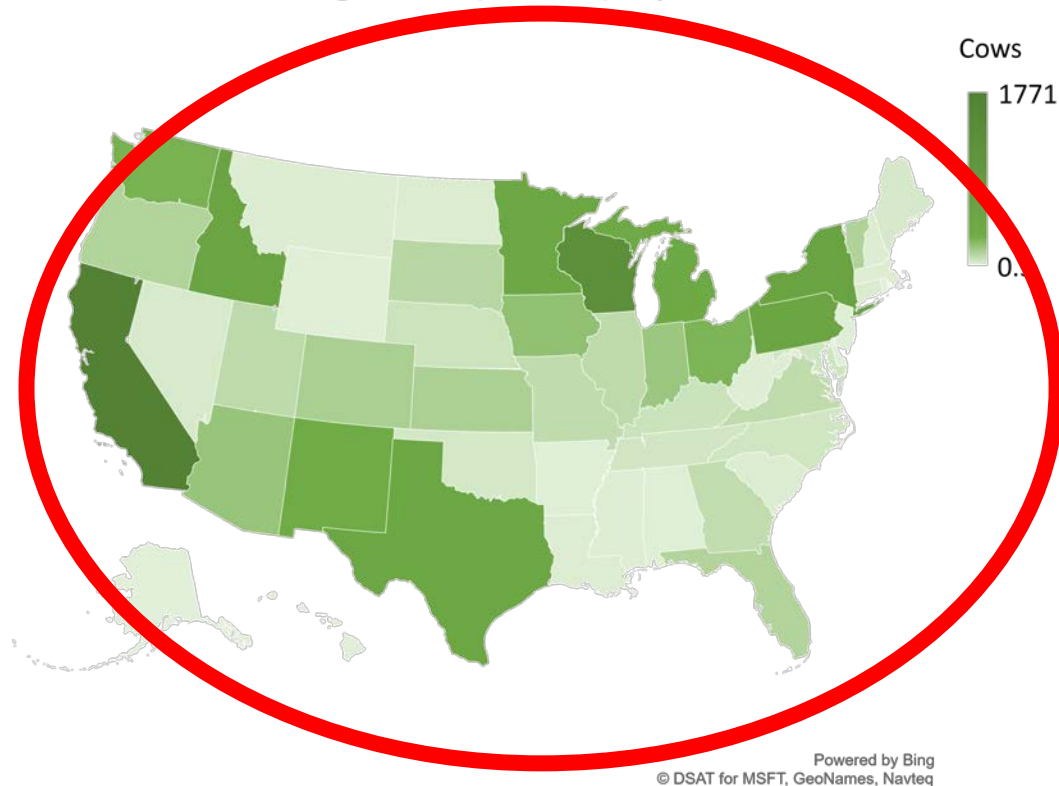
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- Typically 100 cows or less
- 38.9 percent all dairy farms
- Mostly located in Great Lakes and Northeast



Dairy Facility Types – Freestall

Lactating Cows(1000s) by State, 2017

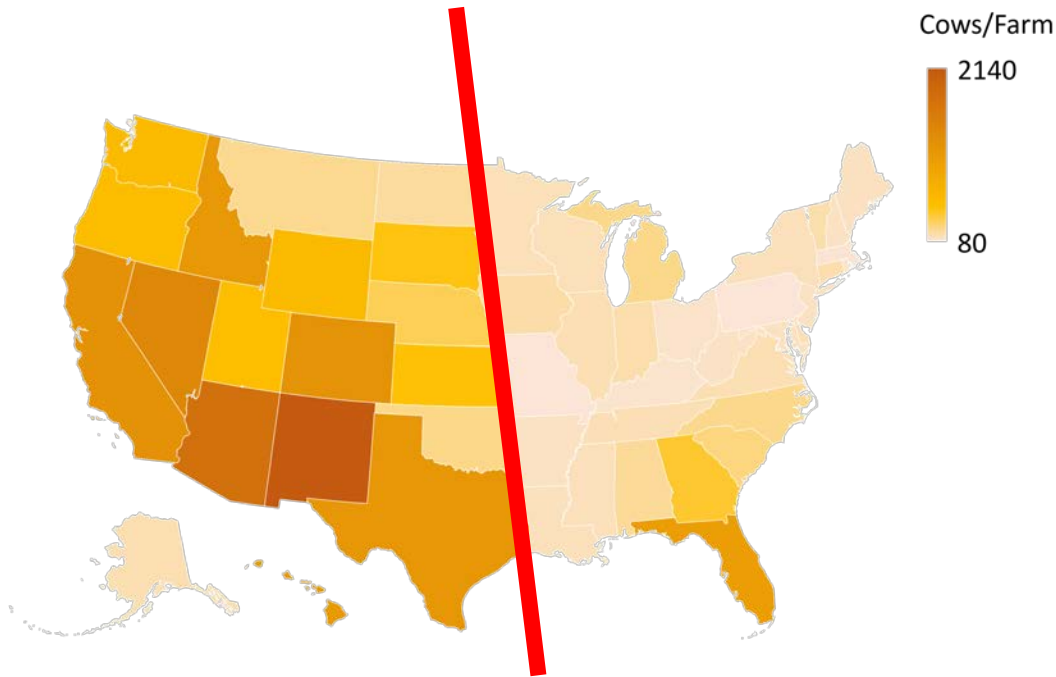


- From <100 to 2000+ cows per barn
- 30.3 percent all dairy farms
- Throughout United States



Dairy Facility Types – Open or Drylots

Lactating Cows per Farm by State, 2017



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- Typically 1000 cows or more
- 29.2 percent all dairy farms
- Mostly located in Western United States



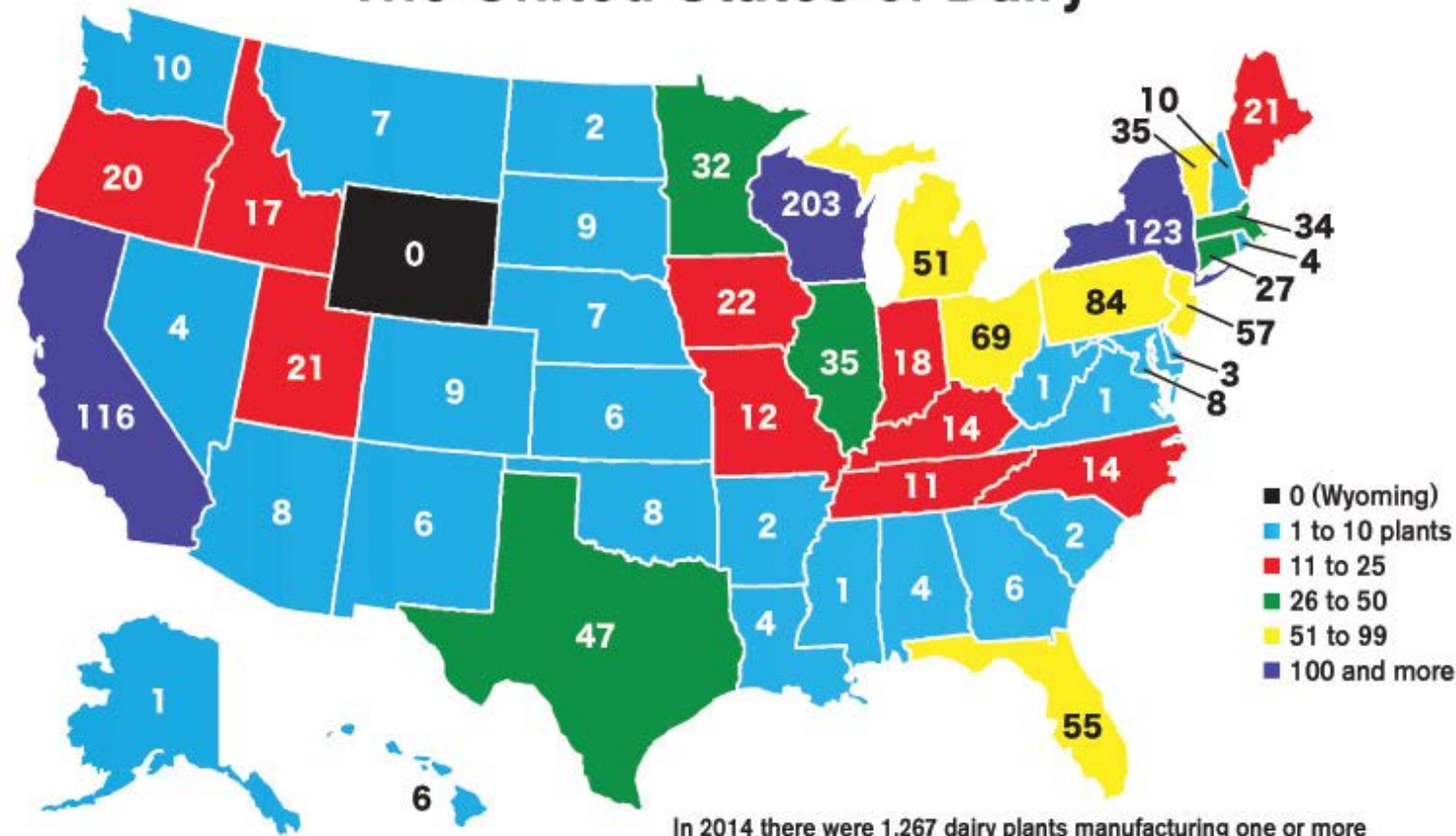
Dairy Cooperatives

- Over 130 dairy cooperatives
 - ≈ 80 percent of milk volume
 - ≈ 80 percent dairy farms
- Types
 - Bargaining – negotiate milk price and markets with proprietary processors
 - Manufacturing – own and operate processing facilities
 - Bargaining & Manufacturing – do both



Milk Processing Occurs in 49 States

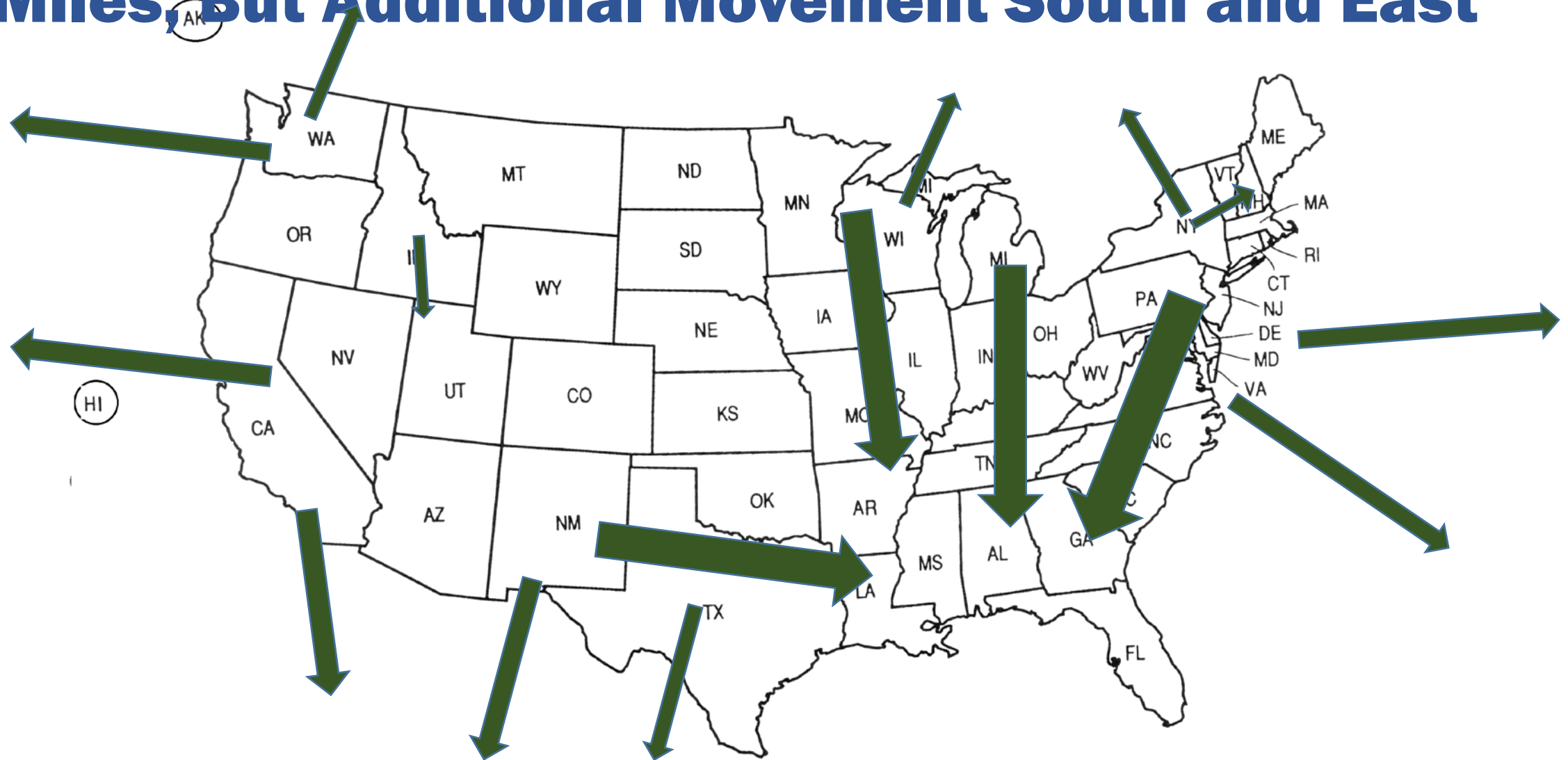
The United States of Dairy



Created by Lindsay Leusby for Dairy Foods

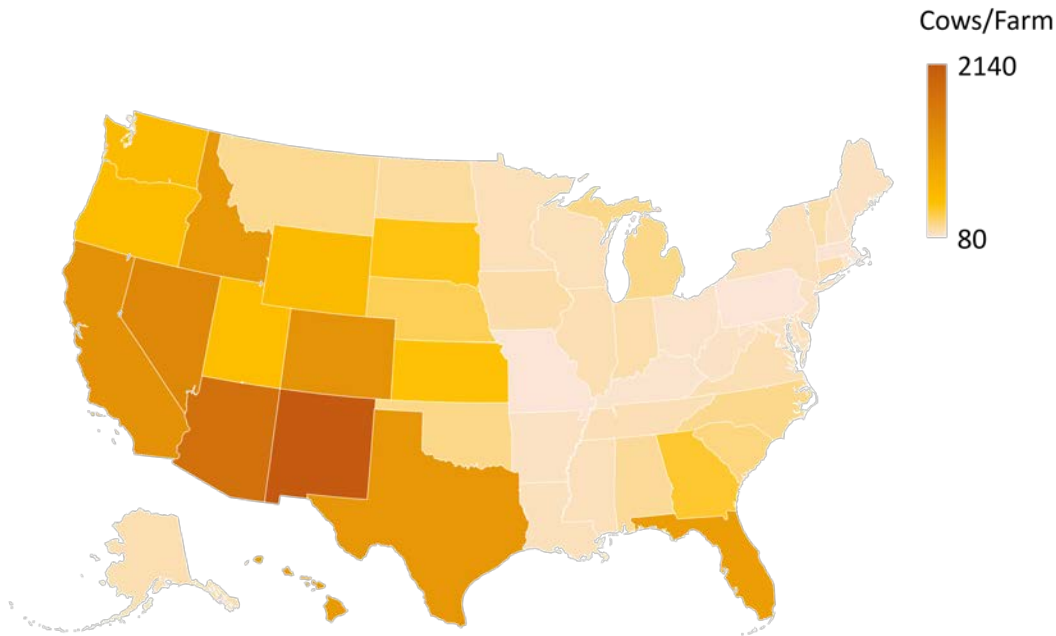
In 2014 there were 1,267 dairy plants manufacturing one or more dairy products. Every state had at least one dairy plant except for Wyoming, according to the USDA's National Agricultural Statistics Service. Note: plants that only process fluid milk are not included.

Milk Movement – Majority Processed within 250 Miles, But Additional Movement South and East



Replacement Dairy Heifers – Future Cows

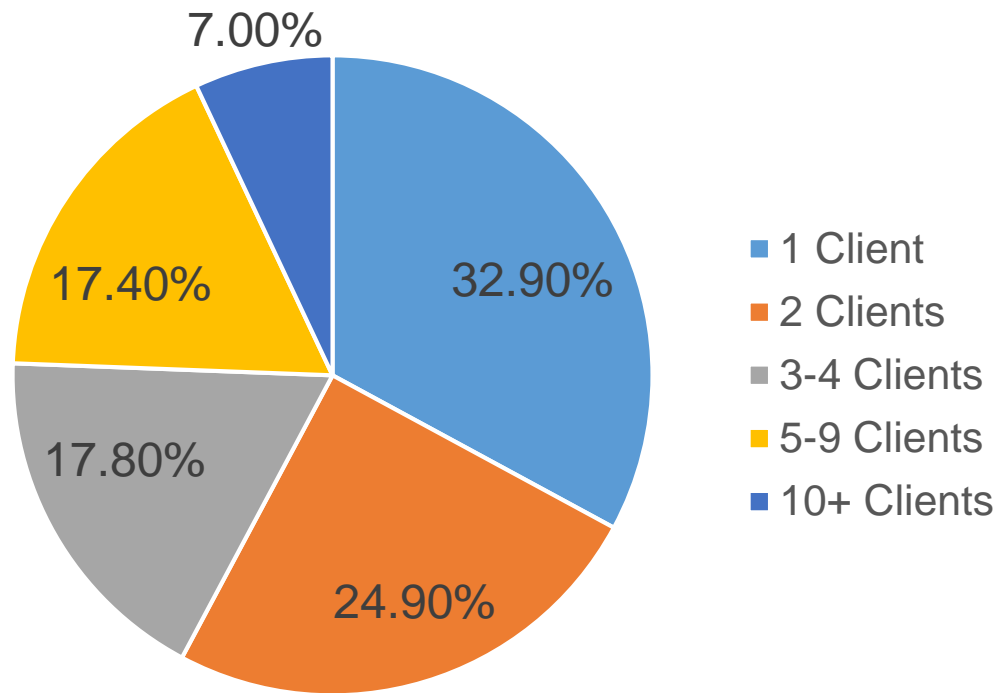
Lactating Cows per Farm by State, 2017



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- 65% of all dairy farms raise replacement dairy heifers on-site
- 35% of all dairy farms sell or raise heifers off-site
 - Farms 500+ cows twice as likely sell or raise heifers off-site
 - 1/3 are pre-weaned, less than 8 weeks of age
- 4-4.5 million female calves born every year
 - 42.7% of dairy heifers sold or raised off-site

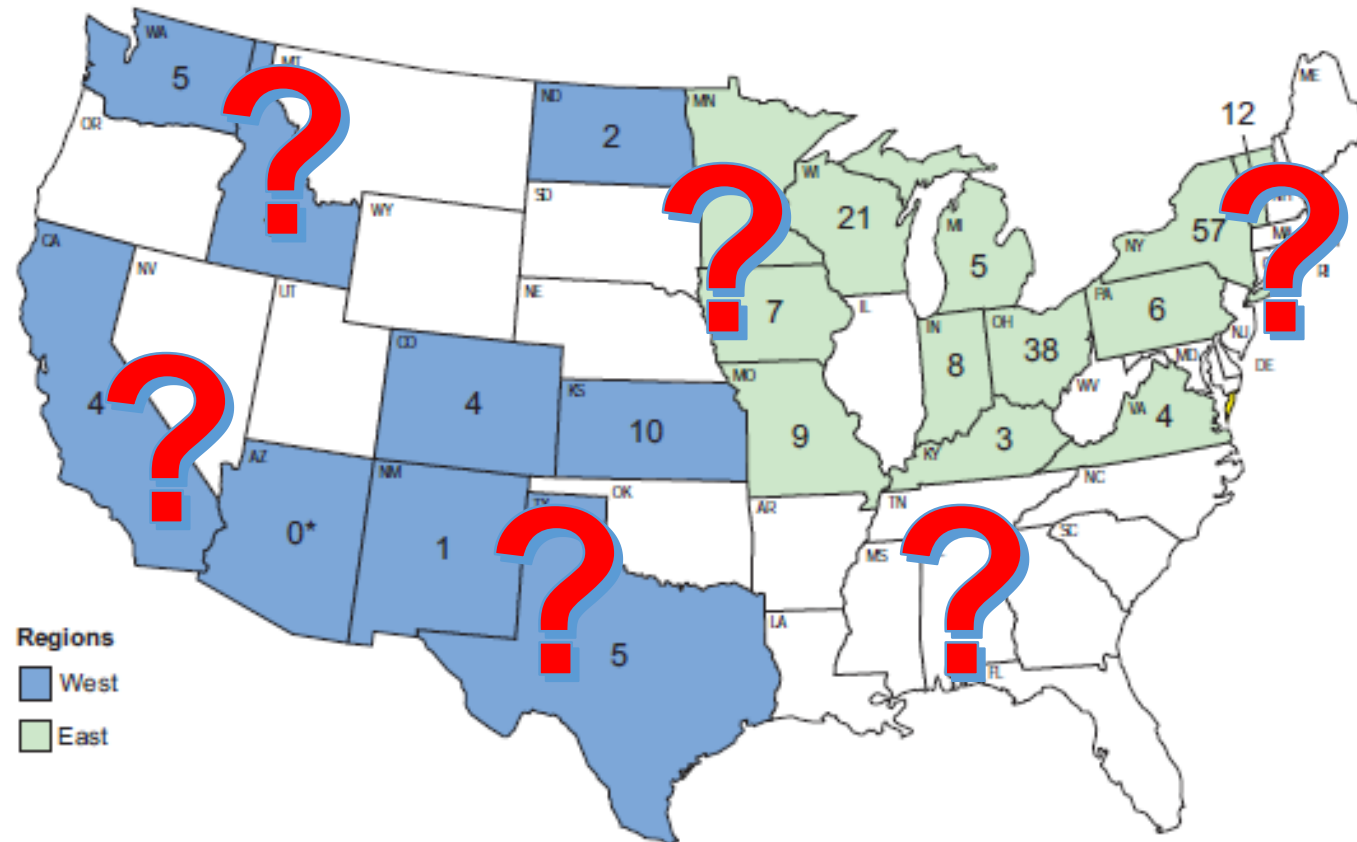
Calf Ranch and Heifer Grower Farms - Clients



- 42.7% of dairy heifers sold or raised off-site
 - 84.3% retained ownership
 - 2.3% sold and bought back
 - 3.7% sold and not bought back
 - 5.7% sold through auction
 - 2.8% sold through cattle dealer

Calf Ranches and Heifer Grower Farms – Locations and Animal Movement

Dairy Heifer Raiser 2011 participating States and number of respondents per State



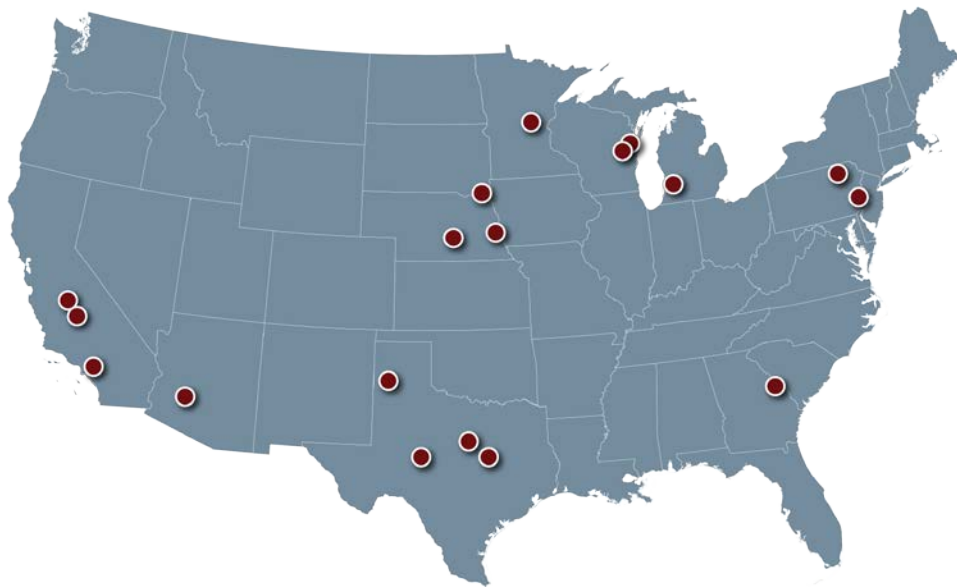
Male Calves – Future Veal and Beef



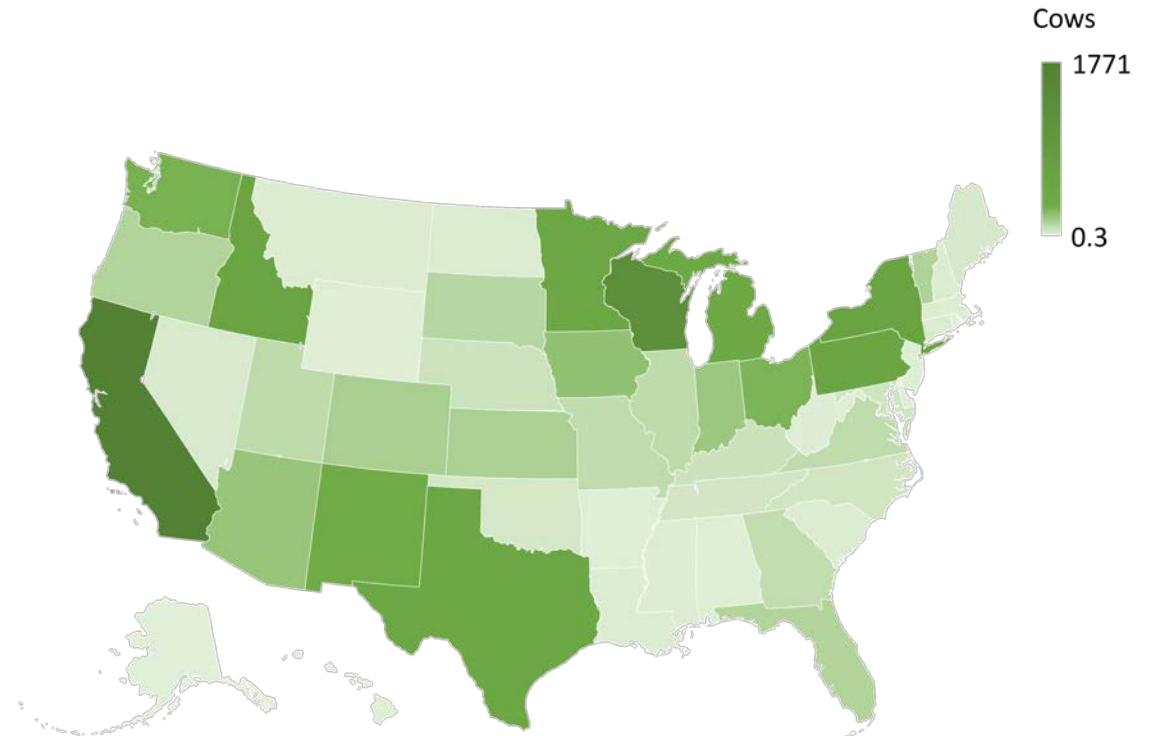
- 90.6% of all dairy farms move male calves off-site
 - 61.8% of all dairy farms sell through auction
 - 14.3% of all dairy farms sell to a heifer raising operation
 - 12.4% of all dairy farms sell to a cattle dealer
- ≈ 4-4.5 million bull calves born every year

Market Cows – 3 Million Head Future Beef

Major Market Cow Slaughter Plants



Lactating Cows(1000s) by State, 2017



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Business Continuity

Challenges and Opportunities and the FARM Program



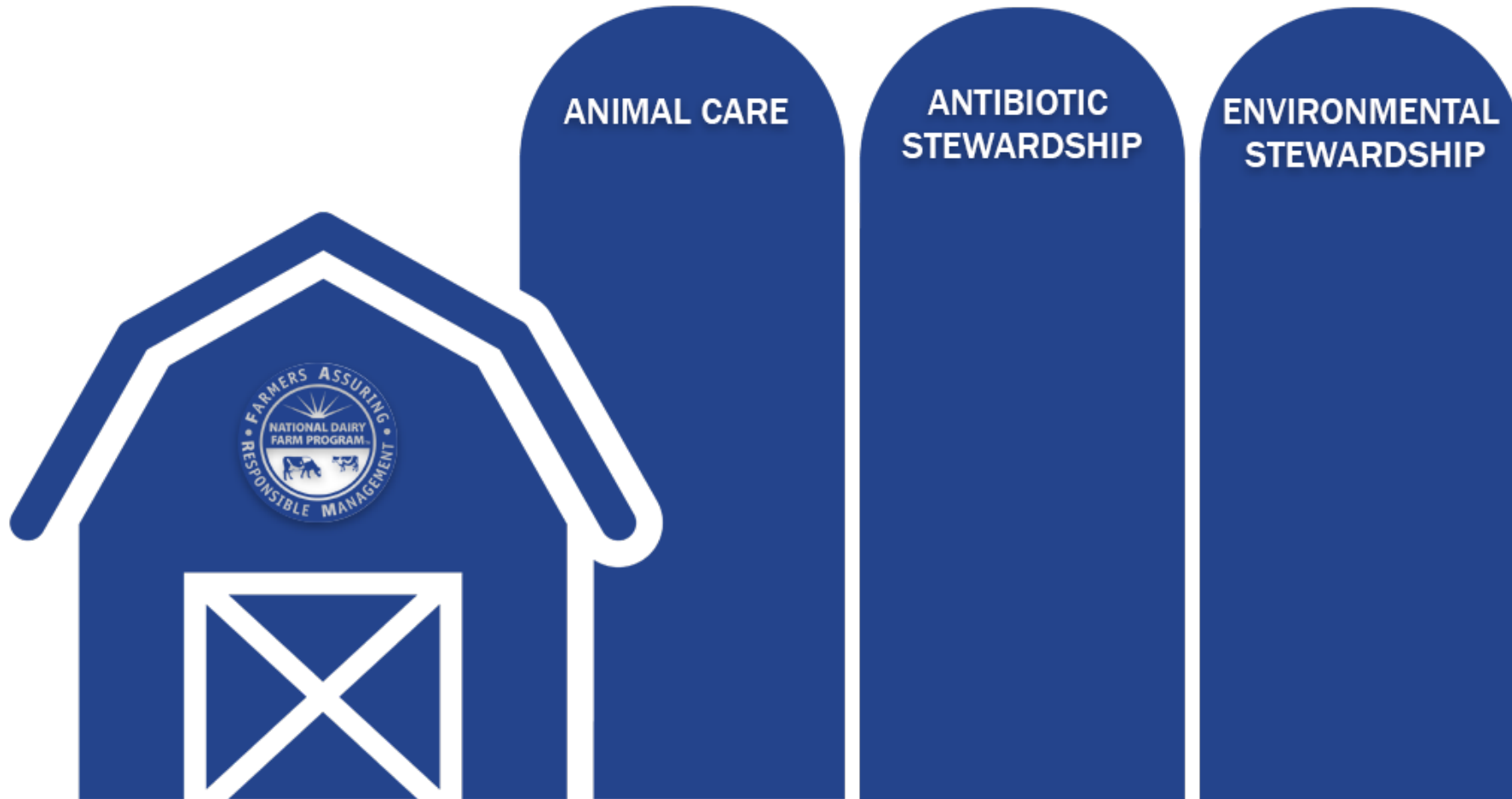
National Dairy FARM Program: Farmers Assuring Responsible Management

Program history

The dairy industry, through **National Milk Producers Federation (NMPF)** with support from **Dairy Management, Inc.** initiated a voluntary program named **FARM: Farmers Assuring Responsible Management in 2009**



On-Farm Quality Assurance Program



FARM ANIMAL CARE

115 Participating Co-ops and/or
Proprietary Processors

Covers **98%** of the United States
domestic milk supply in 49 states

Over **50,000** 2nd party
evaluations completed to date

Over **370** trained FARM Animal
Care Evaluators



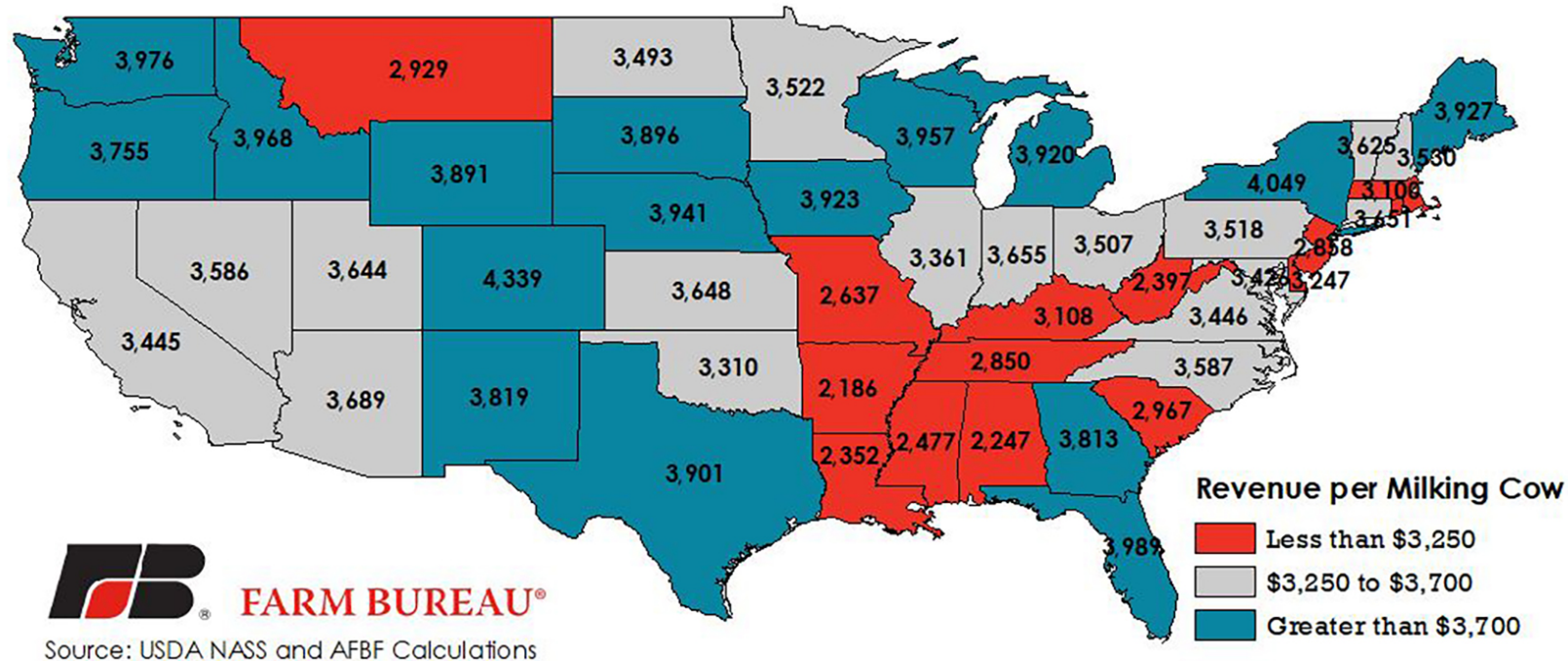
Dairy Business Continuity



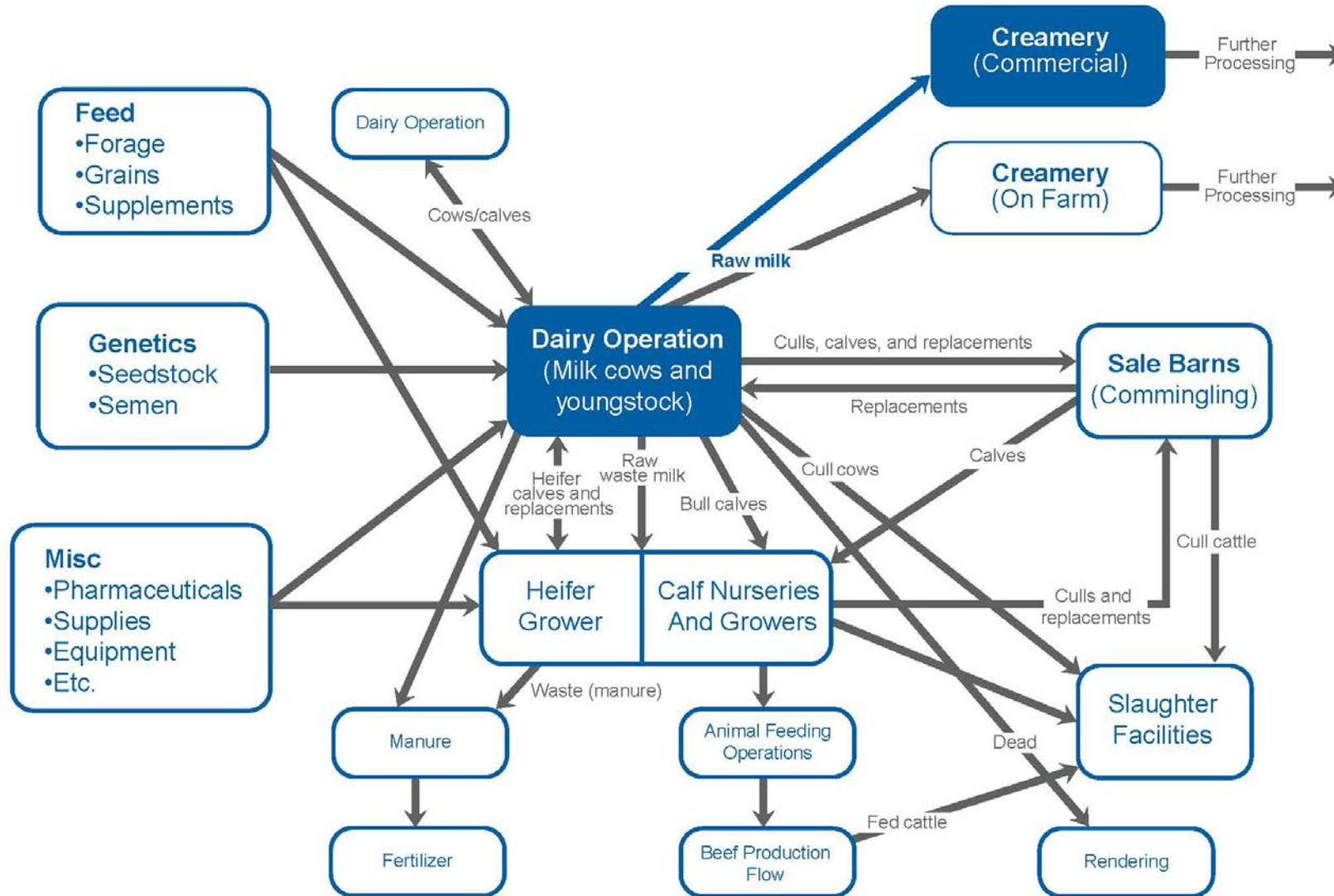
- Milk is money
 - At most, farms have 48 hours storage of milk
 - Returning milk movement to '*normal*' is a priority
- But, there are many daily movements on and off dairy farms

Milk is the Dairy Farms Economic Lifeline

Annual Average Revenue per Milking Cow During 2016
U.S. Average: \$3,712



The dairy industry (producer and processor) business flow is complex



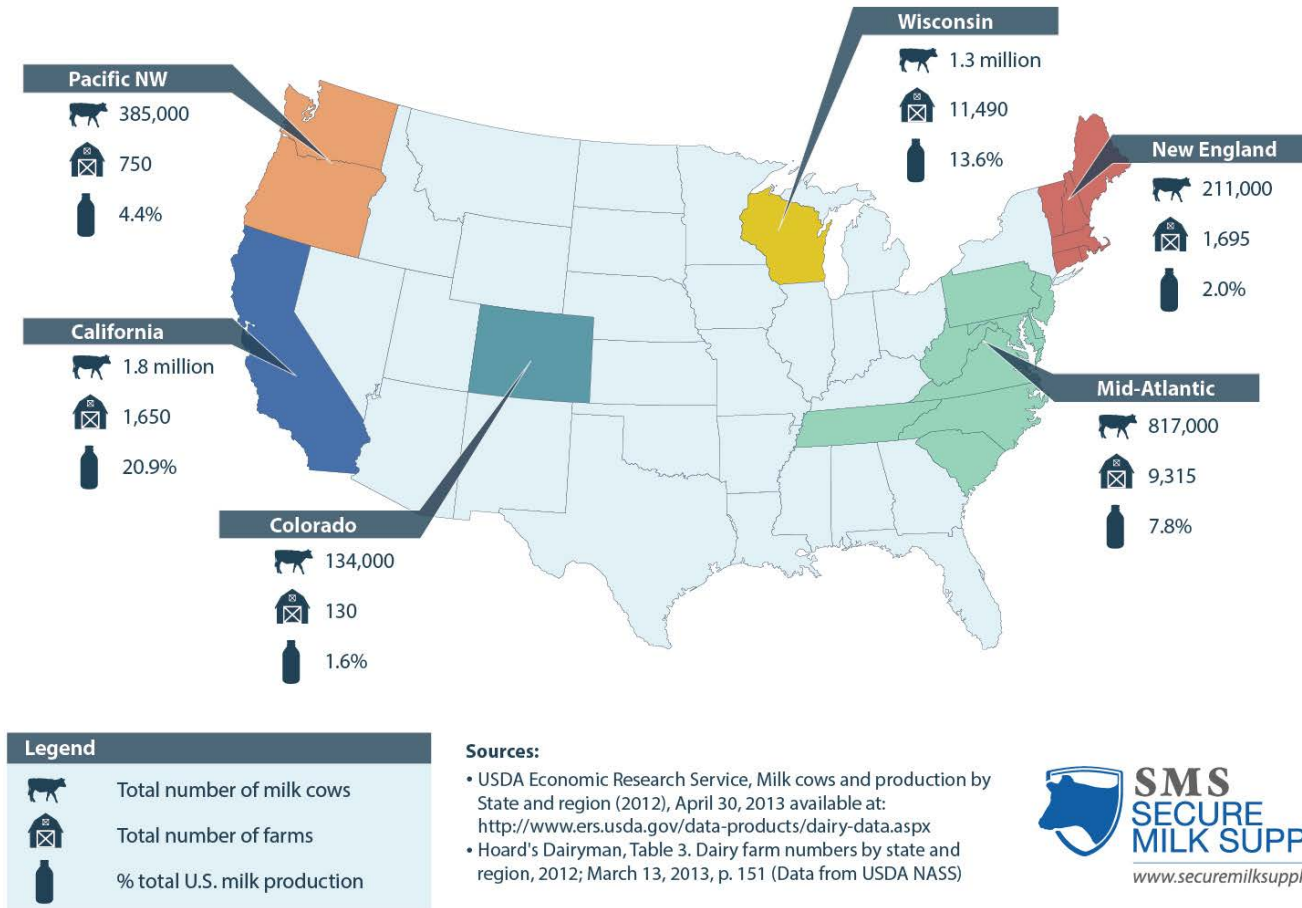
Line of Separation (LOS)

(Milk tanker does not cross in this example)



Secure Milk Supply

Diversity of Milk Production Among SMS Regional Partners, 2012



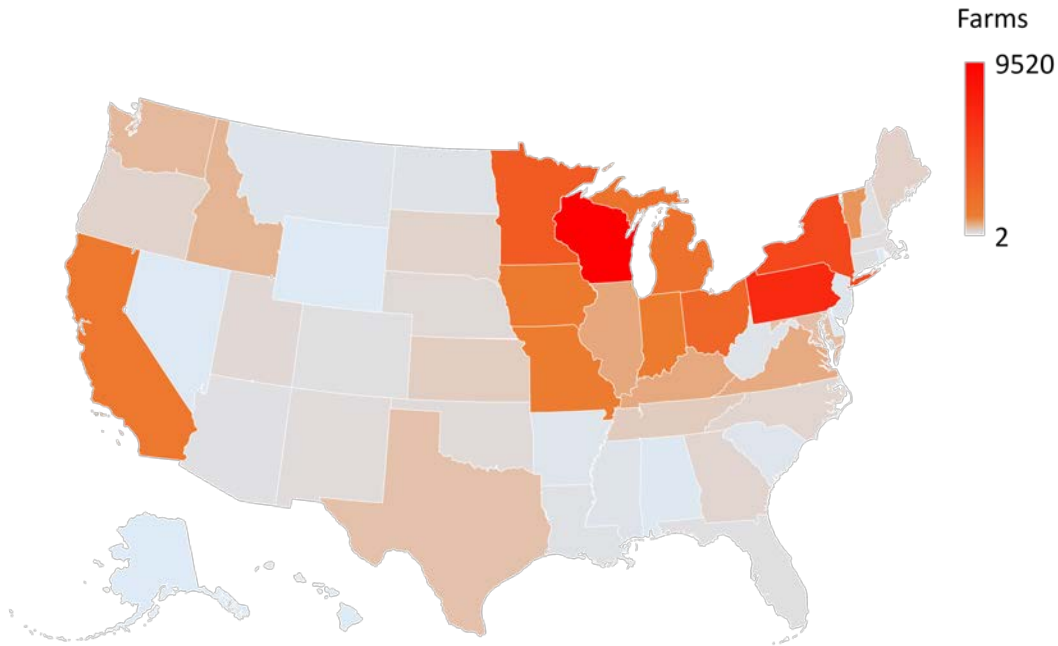
Core Secure Milk Supply Components

- Biosecurity performance standards
 - Dairy premises, milk haulers, processing plants
- Pre-event risk assessments
 - Identify needed mitigation steps to control FMD virus spread
- Decision support and training tools
 - Guidance documents
 - Herd monitoring/surveillance tools
 - Handling of milk from FMD infected farms
 - Surge capacity for FMD vaccination

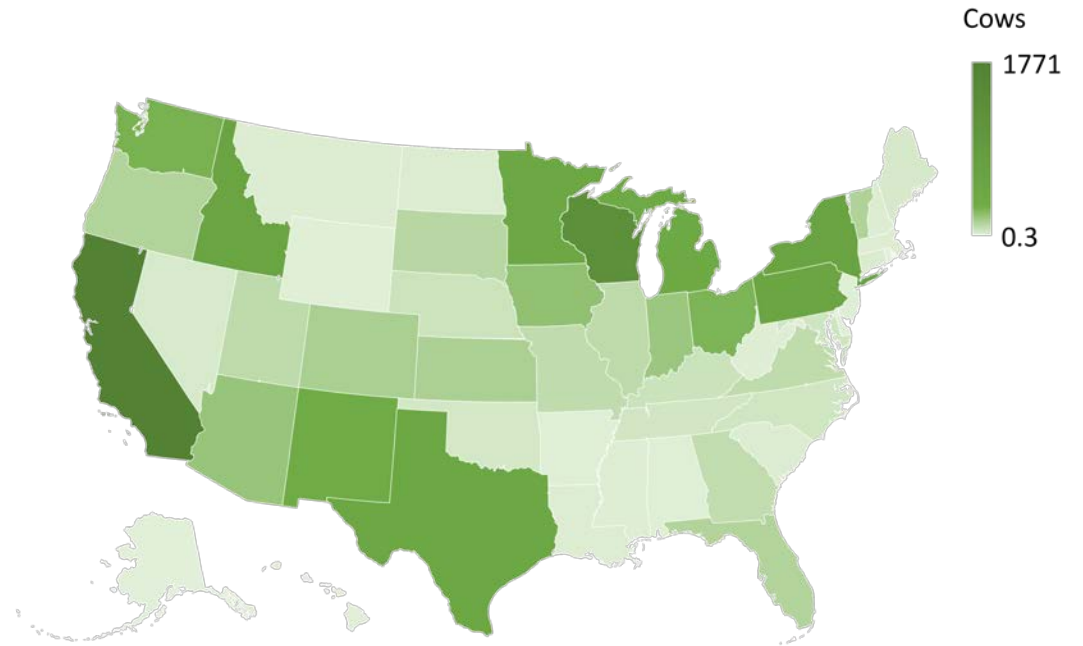


Secure Milk Supply Challenges

Licensed Dairy Farms by State, 2017

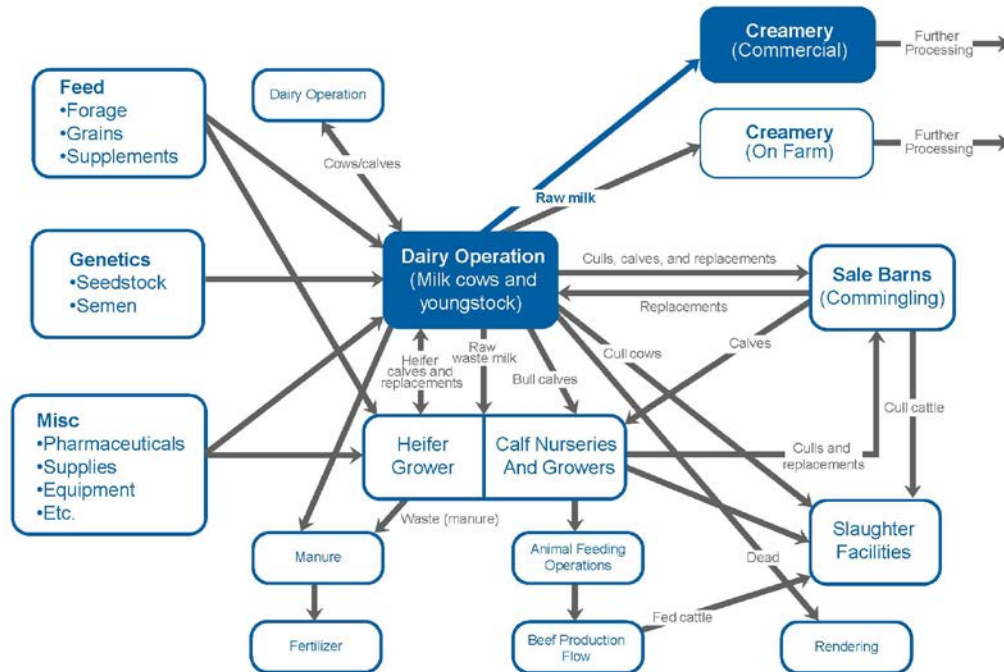


Lactating Cows(1000s) by State, 2017



Secure Dairy Farm Opportunities

The dairy industry (producer and processor) business flow is complex





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